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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
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09/208.105 11/25/98 SAKAMOTO

K 10233.81USW1

EXAMINER

MMC1/0929

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NADAV.0

ART UNIT

PAPER NUMBER

2811

DATE MAILED:

09/29/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/208,105

Applicant(s)

Sakamoto

Examiner

ORI NADAV

Group Art Unit

2811



☒ Responsive to communication(s) filed on Aug 28, 2000

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-8 is/are pending in the application.

Of the above, claim(s) 8 is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-7 is/are rejected.

☐ Claim(s) \_\_\_\_\_ is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 6,7

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

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## **DETAILED ACTION**

### ***Election/Restriction***

1. Applicant's election without traverse of claims 1-7 in Paper No. 9 is acknowledged.

### ***Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.
3. The disclosure is objected to because of the following informalities:
  - On page 1, line 20, #21 is not shown in figure 9.
  - On page 1, line 23, #82 is not shown in figure 9.
  - On page 1, line 25, #17 is shown as a gate electrode in figure 9.
  - On page 11, line 20, and throughout the specification the word "wring" should read "wiring".Appropriate correction is required.

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***Drawings***

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the thinner wiring layer at the irradiated region, as recited in claim 1, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

***Claim Objections***

5. Claims 1-7 are objected to because of the following informalities: the word "wring" should read "wiring". Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 1-4 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

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There is no support in the specification for a wiring layer at the irradiated region being thinner than the wiring layer at other regions, as recited in claim 1.

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

10. The phrase "located on the substrate one of directly and indirectly", as recited in claim 1, is unclear as to what is it meant.

11. The claimed limitation of a wiring layer formed on regions, as recite in claim 1, is unclear as to which regions applicant refers.

12. The claimed limitation of a thinner wiring layer being formed on regions expect for region to be irradiated so as to reach the radiating rays to the region to be irradiated, as recited in claim 1, is unclear as to what is meant by the limitation of

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expecting a region to be irradiated, radiating rays to the region to be irradiated, and how a region can reach radiating rays.

13. The structural limitation of a wiring layer not present at the irradiated region, as recited in claim 2, is unclear as to how a wiring layer can be omitted from the irradiated region and be present at the irradiated region (claim 1) at the same time.

***Claim Rejections - 35 USC § 103***

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 1-7, insofar as in compliance with 35 U.S.C. 112, are rejected under 35 U.S.C. 103(a) as being unpatentable over Mori et al. (5,539,244) or Kinzer (5,644,148). Mori et al. teach in figure 1 a semiconductor device comprising a substrate 1 having a region to be irradiated, a metal wiring layer 12 comprising aluminum (abstract) located on the substrate one of directly and indirectly, wherein a thinner wiring layer being formed on regions expect for region to be irradiated so as to reach the radiating rays to

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the region to be irradiated, and wherein none of the wiring layer is located on the region to be irradiated.

Kinzer teaches in figure 22 a semiconductor device comprising a substrate 300 having a region to be irradiated, a metal wiring layer 160 comprising aluminum (column 15, line 48) located on the substrate one of directly and indirectly, wherein a thinner wiring layer being formed on regions expect for region to be irradiated so as to reach the radiating rays to the region to be irradiated, and wherein none of the wiring layer is located on the region to be irradiated.

Although Mori et al. and Kinzer do not explicitly disclose a wiring layer being used as a mask and being adapted for restricting penetration of radiating rays into regions except for the region to be radiated, this feature si inherent in Mori et al. and Kinzer's device, because the Mori et al. and Kinzer's structure is identical to the claimed structure. In any event, a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

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Regarding claim 3, Mori et al. and Kinzer teach an insulation layer 9 and 321, respectively, being located on the region to be irradiated.

Regarding claim 4, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to form a wiring layer having a thickness so as not to provide any adverse effect on the regions except for the irradiated regions, since it is a matter of design choice within the skills of an artisan, subject to routine experimentation and optimization.

Regarding claim 6, Mori et al. and Kinzer teach a region to be radiated is a positive-negative junction region where a parasitic diode is generated.

**Papers related to this application may be submitted to Technology center (TC) 2800 by facsimile transmission. Papers should be faxed to TC 2800 via the TC 2800 Fax center located in Crystal Plaza 4, room 4-C23. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The Group 2811 Fax Center number is (703) 308-7722**

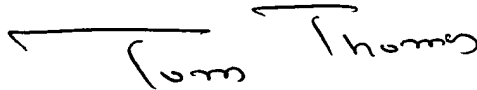


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**and 308-7724. The Group 2811 Fax Center is to be used only for papers related to Group 2811 applications.**

Any inquiry concerning this communication or any earlier communication from the Examiner should be directed to *Examiner Nadav* whose telephone number is **(703) 308-8138**. The Examiner is in the Office generally between the hours of 7 AM to 3 PM (Eastern Standard Time) Monday through Friday.

Any inquiry of a general nature or relating to the status of this application should be directed to the **Technology Center Receptionists** whose telephone number is **308-0956**

  
Tom Thomas  
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Ori Nadav, Ph.D.

September 25, 2000